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SHIPPING LIVE FISH.

With Their Gills Kept Wet They Will Live Out of Water Several

Experiments made in Germany with reference to cheap transportation for live fish have demonstrated that all kinds of fish can live for days outside of their natural element, water, under certain conditions.

This apparently wonderful fact will be easily understood by examining the breathing apparatus of fish. The gills of fish are organs similar to the human lungs; the blood in them comes up close to the surface. The lungs exchange for the outside air, rich in oxygen, carbonbic acid which has been formed in the lungs. On the other hand, the gills of fish are constantly washed by water containing oxygen. The thin membrane of the gills separates the blood in them, vitiated with carbonic acid, from the water containing oxygen and the practical result is the same as with the human lungs. Carbonic acid is exchanged for oxygen.

It had been noticed long ago that many kinds of fish could live out of water for some time provided that the gills remain wet. The experiments made aimed at keeping the gills wet and to see to it that this moisture be well charged with oxygen. In order to keep the gills wet the evaporation of the moisture of the gills had to be prevented. For this purpose the fish were placed in an atmosphere thoroughly saturated with water vapor. A hermetically closed wooden box was filled with water to the depth of about one-third of an inch, or the bottom was covered with wet rags, which through evaporation kept the air in the box a ways saturated with water vapor. The fish were placed in a box which was then shut hermetically by the lid.

Through a tube, reaching to the bottom, oxygen was introduced and allowed to escape through a tube in the lid. This oxygen before entering the box passed through several water bottles which thoroughly saturated it with water vapor. In this way the fish are always in a pure oxygen atmosphere and a drying up of the gills is not to be feared. The result of the experiments was surprising. Carp, tench, bleak, and other fish remained in the box for from three to four days perfectly well.

It is expected that this mode of transportation for fish will become popular, as it is much more economical than shipping live fish in water tanks. By the latter method the weight of every shipment was ninety-three to ninety-six per cent. water, -- Exchange.

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DAILY TIMES FISH BUREAU.

Today's Arrivals and Receipts.

Sch. Dictator, Cape Shore, 130,000 lbs. fresh fish.

Sch. Orinoco, Cape Shore, 140,000 lbs. fresh fish.

Seh. Mary E. Harty, scining, 9 bbls. salt mackerel, 900 fresh medium mackerel.

Sch. Muriel, seining, 7 bbls. salt mackerel. Sloop Helena, netting, 550 fresh mackerel.

Sloop Nettie, netting, 900 fresh mackerel. Sch. Gladys, 20 fresh mackerel.

Sloop W. H. Clement, netting, 800 fresh mackerelr

Sch. Mary A., netting, 200 fresh mackerel. Sch. Carrie E., netting, 700 fresh mackerel. Sch. Marguerite, 400 fresh mackerel.

Sloop Evelyn, netting, 600 fresh mackerel. Sch. Mystic Bell, netting, 100 fresh mack-

Seh. Natilus, 400 fresh mackerel.

Sloop Gardner Heath, netting, 600 fresh

Sch. Reliance, netting, 100 fresh mackerel. Sch. Scud, netting, 475 fresh mackerel. Sch. Mary E. Webb, netting, 220 fresh august 27.

Todays Fish Market. These prices are based on the last known

Spilting prices of fresh fish; Large Eastern cod, \$1.75; medium do., \$1.25; large Western cod, \$2.12 1-2; medium do., \$1.37 1-2; haddock, \$1.00; cusk, \$1.50; hake, \$1.00; pollock, 65 ets.

Salt handline Georges codfish, \$4.25 per, cwt. for large, \$3,25 for medium.

Salt Trawl Georges codfish, \$3.75 for large \$3.25 for medium.

Salt hake, \$1..12 1-2]

Sait haddock, \$1.50.

Salt eusk, \$2.00.

Salt pollock, \$1.25.

Salt trawl bank codfish, \$3.25 for large, \$2.37 1-2 for medium.

Large salt "drift" Georges codfish, \$3.75 medium do., \$2.75.

Bank halibut, 8 cts. per lb. for white and 6 cts. per lb. for gray.

Large salt mackerel, \$25 50 per bbi.

Large salt mackerel (rimmed), \$28.50 per

Fresh medium mackerel, 12 cts. each.

Fresh tinker mackerel, 3 cts. each. Large fresh mackerel, 20 cts. each.

Salt medium mackerel, (rimmed) \$21 per

Boston.

Sch. Albert W. Black, 114 swordfish.

Sch. Albert D. Willard, 87 swordfish.

Sch. E. C. Hussey, 25,000 cod.

Sch. Mary A. Gleason, 30,000 cod.

Sch. James R. Clark, 28,000 cod.

Sch. Pearl, 2 swordfish.

Sch. Thomas Brundage, 23,000 cod.

Sch. Agnes V. Gleason, 25,000 cod.

Seh. Priscilla, 118 swordfish.

Sch. Catherine D. Enos, 86 swordfish.

Sch. Estelle S. Nunan 34 swordfish.

Sch. Appomattox, 13,000 cod.

Sch. Boyd and Leeds, 20,000 cod.

Seh. George E. Lane, Jr., 30,000 cod.

Seh. Mildred Robinson, 40,000 haddock, 6000 cod, 1000 hake.

Sch Spray, 40,000 haddock, 3000 cod, 2000

Seh. Motor, 80 swordfish.

Seh. Dorothy, 32,000 cod.

Sch. Gladys and Sabra, 19,000 cod.

Haddock, \$4 per. cwt.: large cod, \$3.75; market eod, \$1.25 to \$1.50; pollock, \$2 to \$2.25; swordfish, 6 to \$6 1-2 ets. per lb.

Mackerel Notes.

The fare of sch. Helen G. Wells sold to the Gloucester Mackerel Co. for a lump sum, \$2350.

A letter from Capt. Cushing of sch. Speculator, at Southwest, Harbor, Me., a few days ago reports seeing lots of mackerel on Marblehead bank, but bad weather interfered with fishing operations. He was confident, with good weather, that a trip could be secured there.

Other reports from down east also report mackerel schooling on Marblehead bank.

Capt. Jason Daley of sch. Muriel reports mackerel on Georges, schooling night and day but so wild that it is impossible to catch

The netters did well off here Saturday and Sunday nights, getting from 200 to 600 fish august 28. 191

FROM PACIFIC COD FISHING.

Lambert Kippen Arrives Home from Anacortes.

TELLS INTERESTING TALE

Interesting Story of How Gloucester Men Fared There.

Mr. Lambert Kippen of this city, who was one of the party of Gloncester fishermen who went from here March 2, to Anacortes, Washington, to go salt cod fishing in the two vessels of the Robinson Fish Co., of that place, arrived home yesterday.

Mr. Kippen relates a very interesting story of his trip and also brings much general information as to the methods of the fishing there. He thinks Anacortes is a lively little place, that Mr. Robinson is a fine man, but no more Pacific salt banking for him, and he is glad to be back in Gloncester.

Mr. Kippen was cook in the three-masted sch. Joseph Russ, which sailed on a sal bank codfishing trip from Anacortes on March 19 and arrived back at that port August 20, with what is claimed to be the largest salt cod trip ever landed. The vessel had 188,000 codfish in count. All fish are figured by the ton out there, but the bookkeeper figured it up that the 188,000 fish would go 850,000 pounds.

On the Russ, on the trip just completed, were Capt. Charles Foss, three mates, Steward Kippen and his helper, a watchman, a dress gang of 15 men and 20 fishermen, the latter all from Gloucester, being part of the party which went from here in March to go fishing for the Robinson Company.

The vessel sailed in to the Behring sea, a distance of 1800 miles from Anacortes, before beginning fishing operations. For the first month the weather was fine, but after that they began to have some blowy days and tog also, the same as on the banks of the Atlantic. The vessel fished practically the whole fishing season, which is considered over August 15, as after that date, the weather gets too bad and the hurricanes come on.

Regarding the fishing, Mr. Kippen said that the men fished in single dories, using handlines. They only caught the fish and brought them on board, where the dress gang take them and clead them and the salters salt them down in the hold. Some days the men in the dories would make two or three trips from the vessel and get full doryloads, while some days, on account of the weather they would make but one. The fishing was uneven and some of the dories did a great deal better than others. The weather was much colder than it is here and it was nothing uncommon to see ice on deck or in the draw buckets which it had made over night.

Regarding life on the vessel, Mr. Kippen said that when underway, all hands were divided into three watches, each in charge of one of the mates, but when at anchor on the fishing grounds, at night, the watchman went on at 6 o'clock and stayed on until 6 o'clock in the morning, taking all the care of the vessel. At 4 o'clock the watchman called the cook, who got breakfast for 20 fishermen, all sitting down to one table, At 7 o'clock the dress gang had breakfast.

As to the compensation Mr. Kippen said he had no kick coming, as he was on wages from the day he left here until the vessel arrived back at Anacortes, but that with some of the fishermen it was different. The fishaugust 28.

ermen were paid \$25 per thousand fish count caught and all hove separate. In the Russ, Jerry McGrath, one of the best known fishermen who ever sailed from this port, and another man were high line. They had 12,-000 fish each and and their share was \$300 each. Out of this, Mr. Kippen says, they had to pay their fare from here to Anacortes, \$54 per man, and also their store bill, the latter the same as they would have to here only things were higher out there.

From this high line share the fishermen ran down the scale, some of them doing poorly, so poorly that they had about \$25 or \$30 to show for their season's work, and some had hardly that. Mr. Kippen says that on sch. Alice, which arrived a few days ahead of them, and which was also manned by fishermen who went from here at the same time as those in the Russ, there were three who, when they came to settle up,

were nearly in debt.

When asked by a Times reporter how the fishermen liked the voyage, Mr. Kippen said it was not a success and that some of the men were sore and dead against it. Od the passage home the mate ordered them to scrub the vessel and fix things up, as is usual, but only three or four of them took hold to do it, the aest of them being too dissatisfied with the voyage to do it. When the vessel reached Anacortes the men settled up. McGrath and three others remained there, having a job to take out the fish. The others, or most of them, went to Seattle, where they shipped in halibut catchers or on towboats, wherever they could get a chance. He thought that probably Mr. Grath, who is a very smart man, might have a job with Mr. Robinson all winter

When asked if any others of the men were home, Mr. Kippen said that he was the only one to come and it cost him \$92 to get here. He said that some of them would like to be home and would like to come if they had the money to get here. "Some of them would be home if they could get home and don't you forget it," was the way he put it.

Speaking of the chances of work out that way, Mr. Kippin said it was all right for a cook, as there were lots of chances to go cook for lumber camps, but that generally speaking, the dull season of the year was now coming on.

Charlie Hines of this city, who went out with the party, and was cook of sch. Alice, had shipped to go fresh halibating with Jack Hickey, formerly of this city, who had been out there a long time was one of the crackajack skippers.

Mr. George Pendleten, formerly of this city, and well known to about all connected with the fishing business here, was also with

Capt. Hickey.

"Hill" (Buck) Leary, also formerly of this city, was a salter in one of the Seattle salt cod bankers and got \$90 per month. He like Pendleton had been out there for several Kippen saw Leary several times while they were on the bank and had several good yarns with him. He wanted to know all about how things were going here in Gloncester and inquired for all his old friends

Mr. Kippen says that the vessel which is among the leaders out of Seattle is sch. Carrier Dove, formerly of this port. Her skipper is a hustler. He carries a small picked erew and imakes, two trips a season, and his men make big money. She is credited with being the fastest sailing fishing vessel out to Seattle. Generally she carries only from nine to 12 fishermen.

On the Russ, Mr. Kippen says the captain and mates got good pay. The first splitter gets \$90 per month and the second splitter \$60 per month, the first salter \$90 per month and the second salter \$60 per month. The salter's helper gets \$20 per month and what fish he can catch and the cook's helper gets \$20 a month and what fish he can catch.

At Anacortes, a night's lodging cost 25 ents, but a man had to go out for his meals, The cheapest they could get out of it for was \$6 per week and then, having to go out for meals, it did not seem like a home.

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The only work for a man at Anacortes this time of the year was in the saw mills, where the pay was 20 cents an hour.

It was Mr. Kippen's opinion that the salt bank fishery out on the Pacific was not to be compared with the same fishery here. He thought the men did not do so well on the average, although a few fishermen would make good meney, being extra good men, and the same men who always do well at home here. As a whole he did not think the men who went from here felt that they had gained anything by going, and he repeated his assertion that some of them woold be home if they could get home. He said a man like Mc-Grath would make good anywhere, as he was an extra good man, and he thought that if he stayed out there he would probably be well placed next season.

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ST, JOHN'S ALARMED.

Report of Settlement of Fishery Dispute Disturbs Bona's Crowd.

Loth To Belleve England and United States Will Setle Matter.

A St. John's N. F., despatch of yesterday says: "Some concern is exhibited in official circles over the repetition of reports of a settlement of the fishery question regardless of the colony's views. The government, however, does not believe that such a course is intended, and understands that negotiations are progressing between the American and British cabinets, but presumes they have not yet reached a stage when submission to the colony is needful, the British cabinet being fully aware of the colony's attitude on the the question.

"The despatch of the American navy tng Potamac to Newfoundland for the herring season is understood to be mainly for the purpose of towing Americau fishing vessels and clearing channels through the ice if they are frozen in as in previous years."

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DAILY TIMES FISH BUREAU.

Today's Arrivals and Receipts.

Sch. Catherine D. Enos, shore.

Sch. Addie M. Story. Sch. Olga, Le Have Bank, 130,000 lbs. fresh fish.

Sch. Sheffeyld, Rips, 45,000 ibs. salt Pinkey Metamora, New Harbor, cured fish for W. F. Moore & Co.

Sch. Lizzie M. Stanley, seining, 29 bbls. salt mackerel.

Sch. Hattie M. Graham, seining, 11 bbls. salt mackerel.

Sch. Shenandoah, seining, 12 bbls. salt

Sch. S. F. Maker, seining, 12 bbls. salt mackerel.

Sch. Effie M. Prior, seining, 56 bbls. salt mackerel.

Sch. Electric Flash, seining.

Sch. Patriot, Rips, 40,000 lbs. salt eod. Sloop Margaret, netting, 1300 fresh medium mackerel.

August 28

Todays Fish Market. These prices are based on the last known

sales.

Spilting prices of fresh fish; Large Eastern cod, \$1.75; medium do., \$1.25; large Western cod, \$2.12 1-2; medium do., \$1.37 1-2; haddock, \$1.00; cusk, \$1.50; hake, \$1.00; pollock, 65 ets.

Salt handline Georges codfish, \$4.25 per cwt.

for large, \$3.25 for medium. Salt Trawl Georges codfish, \$3.75 for large \$3,25 for medium.

Salt hake, \$1..12 1-2] Sait haddock, \$1.50.

Salt cusk, \$2.00. Salt pollock, \$1.25.

Boston.

Seh. Buema, 30,000 haddock, 3000 cod, 2000 hake.

Sch. Elsie F. Rowe, 1000 haddock, 18,000 eod, 1000 pollock.

Seh. Catherine and Ellen, 60,000 haddock, 15,000 cod, 10,000 hake.

Sch. Flora J. Sears, 30,000 haddock, 2000 cod, 1000 hake.

Sch. Mattakeesett, 10 bbls. salt mackerel.

Sch. Georgianna, 39 swordfish, Sch. Louisa Polleys, 22,000 cod.

Sch. Mystery, 50 bbls. fresh kyaes.

Sch. Rose Standish, 20,000 cod.

Sch. Stranger, 74 swordfish. Seh. Frank Munroe, 12,000 eod.

Sch. Louise C. Cabral, 10,000 haddock. 20,000 cod.

Sch. Alice M. Guthrie, 40,000 haddock, 5000 cod. Sch. James S. Steele, 32,000 haddock. 10,-

000 cod. Sch. Elizabeth Silsbee, 20,000 fresh mackerel, 5 bbls. salt mackerel.

Sch. Nellie Dixon, 8000 fresh medium mackerel, 20 bbls. salt mackerel.

Seh. Robert and Arthur, 35,000 haddock, 3000 cod, 1000 hake.

Sch. Pearl.

Sch. Flora S. Nickerson, 50,000 haddock, 4000 cod, 4000 hake.

Seh. Mary Edith, 25,000 haddock, 2000 cod, 3000 hake.

Sch. Eva Avina, 700 haddock, 12,000 cod, 300 polloek.

Sch. Viola, 33 swordfish.

Seh. Ida M. Silva, 57 swordfish, Sloop Morning Star, 500 eod.

Haddock, \$1 to \$2 per. cwt.; large cod, \$4; market eod, \$1. to \$1.50; hake \$1.50 to \$3; pollock, \$2 swordfish, 7 1-2 ets. per lb.; fresh medium mackerel 10 cts. each; fresh tinker mackerel, 5 cts. each; salt medium mackerel, \$20 per bbl.

Mackerel Notes.

Sch. Elizabeth Silsbee, Capt. John Me-Kinnon, made two sets about 10 miles off here yesterday morning and secured 20,000 fresh mackerel, mostly large mediums, with some tinkers mixed in. She went to Boston last night and sold her fare there this morn-

Sch. Nellie Dixon, Capt. James Ellis, is also at Boston this morning with 5000 fresh medium mackerel.

Several of the seining fleet are at this port this morning with small lots of salt medium mackerel and tinkers. Sch. Effie M. Prior, with 56 barrels, taken off Boon Island a few days ago, has the largest fare today.

Schs. Avalon, Esperanto, Lottie G. Merchant and Marguerite Haskins are reported to have made small hauls off here Sunday.

Sch. Susan and Mary and three or four other seiners harbored at Rockport last night. The fare of sch. Muriel sold to George Per-

kins & Son for a lump sum. The fare of sch. Mooween sold to George

Perking & Son at \$20 per barrel for medium and \$10 per barrel for tinkers. The fare of sch. Lizzle M. Stanley sold to

the Gloucester Mackerel Co. for a lump sum. The fare of sch. Effie M. Prior sold to the Gloucester Mackerel Co. for a lump sum, the fish being mediums and tinkers.